

CROWELL & MORING

1001 PENNSYLVANIA AVENUE, N.W.

WASHINGTON, D.C. 20004-2505

(202) 624-2500

CABLE: CROMOR

FACSIMILE (RAPICOM): 202-628-5116

W. U. I. (INTERNATIONAL) 64344

W. U. (DOMESTIC) 89-2448

JOHN T. SCOTT III
(202) 624-2582

April 3, 1995

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APR -3 1995

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Mr. William F. Caton
Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

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APR -3 1995

Re: CC Docket No. 92-115 FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Dear Mr. Caton:

Transmitted herewith for filing with the Commission, pursuant to Commission Staff's Order in this proceeding released March 2, 1995, are an original and four copies of the "Joint Comments" of AirTouch Communications, Inc., Alltel Mobile Communications, Inc., Baton Rouge Cellular Telephone Company, Bell Atlantic Mobile Systems, Inc., BellSouth Corporation and BellSouth Cellular Corp., New Par, NYNEX Mobile Communications, Inc., U S West NewVector Group, Inc., Radifone, Inc., and Vanguard Cellular Systems, Inc.

Should there be any questions regarding this matter, please communicate with this office.

Very truly yours,

John T. Scott, III

John T. Scott, III

Enclosure

cc: Ms. Regina M. Keeney
Mr. Myron C. Peck
Mr. John Cimko, Jr.
Mr. Stephen Markendorff
Mr. Julius Knapp

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Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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APR 25 1995

In the Matter of)

Revision of Part 22 of the)
Commission's Rules Governing)
the Public Mobile Services)

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

CC Docket No. 92-115

To: The Commission

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JOINT COMMENTS OF CELLULAR CARRIERS

AirTouch Communications, Inc., ALLTEL Mobile Communications, Inc., Baton Rouge Cellular Telephone Company, Bell Atlantic Mobile Systems, Inc., BellSouth Corporation and BellSouth Cellular Corp., New Par, NYNEX Mobile Communications, Inc., Radiofone, Inc., U S West NewVector Group, Inc., and Vanguard Cellular Systems, Inc. (the "Carriers"),^{1/} by their attorneys, hereby submit these comments in response to the "Joint Reply and Comment" of the Telecommunications Industry Association ("TIA") and the Cellular Telecommunications Industry Association ("CTIA"), which was filed in this proceeding on February 2, 1995.^{2/}

I. SUMMARY

TIA and CTIA request the Commission to impose an industry-developed authentication standard on all cellular telephones which

^{1/} The Carriers, either directly or through subsidiaries, affiliates or partnerships, provide cellular telephone service throughout most of the United States.

^{2/} On March 2, 1995, by Order in this proceeding (DA-402), Commission Staff permitted interested parties to file comments on the TIA-CTIA Joint Reply by April 3, 1995.

receive type acceptance after July 1, 1995.^{3/} The Carriers strongly agree that the Commission should require cellular telephones to be capable of performing authentication. However, they also believe that authentication standards should take effect for all phones which are manufactured or imported after a date certain -- three months after the release of the Commission's order on reconsideration in this proceeding. This deadline is consistent with prior actions by the Commission which imposed new requirements on communications equipment. It will also close the loophole that a "type acceptance" date would otherwise create, and thereby will more effectively attack the growing problem of cellular fraud.

II. AN AUTHENTICATION STANDARD IS URGENTLY NEEDED.

Cellular fraud is a serious national problem which is imposing significant costs and burdens on consumers, carriers and law enforcement agencies. Nationwide, fraud has grown at roughly 20% annually, costing the industry approximately \$1 million every day. The industry is devoting millions of dollars to develop

3/ Authentication refers to a process in which each cellular phone is encoded with a unique cryptographic variable and must respond with a specific answer when "challenged" by the cellular network. Because these "challenge-response transmissions are useless without the variable, and that variable is not transmitted but is embedded in the phone, fraudulent access to subscriber information is made virtually impossible. See Joint Reply at 5-6.

TIA and CTIA also propose changes to the "ESN hardening" requirement set forth at new Section 22.919. While the Carriers do not object to these proposals, they believe that authentication is a superior method of fraud protection and thus that, regardless of what action the Commission takes on ESN hardening, it must also require authentication.

methods to combat fraud, but despite those efforts the dollar costs of this crime continue to increase. Moreover, some of the steps carriers have been forced to take to cope with fraud (for example, requiring customers to dial unique "PIN" security codes, or disallowing roaming in certain markets) can also cause inconvenience and frustration among customers.

CTIA, in its initial comments in this proceeding, urged the Commission to adopt specific rules to combat fraud. CTIA proposed rules that would require all cellular phones to meet two new specifications: "hardened" electronic serial numbers ("ESNs") designed to prevent phones from being cloned; and authentication, to prevent fraudulent interception of the transmission of a phone's unique identifying information.

In its Report and Order in CC Docket No. 92-115, 9 FCC Rcd. 6513 (1994), the Commission adopted new Section 22.919, which establishes ESN "hardening" specifications. The Report and Order declined, however, to adopt CTIA's other recommended weapon to combat cellular fraud, mandatory authentication standards. The Commission cited only one reason for not doing so: a concern that authentication standards might preclude the use of "extension" cellular phones. Report and Order at ¶ 59.

In its Petition for Clarification and Reconsideration of the Report and Order, filed December 19, 1994, TIA asked the Commission to adopt mandatory cellular telephone authentication standards. TIA demonstrated that authentication "is a far superior, more efficient, and less costly method of combating cellular fraud." Petition at 12. TIA also explained that authentication

would not interfere with the use of extension phones, and thus that the Commission's sole basis for not adopting authentication was factually incorrect. Id. In the TIA/CTIA Joint Reply, CTIA agrees with TIA and also urges the Commission to require authentication. No party has opposed authentication standards.

The Commission should adopt authentication in its order on reconsideration in this docket. As TIA showed in detail, ESN hardening may slow but will not stop fraud, because the essential ingredients of fraud -- the transmission of subscriber information over the air, which is vulnerable to interception -- will remain. Authentication will, by contrast, eliminate this problem entirely because the only information transmitted over the air and susceptible to interception will be useless. For this reason, authentication will complement the requirement for hardening of ESNs in new phones.

Given that the record shows that authentication is the best current weapon for attacking cellular fraud, it is in the public interest to ensure that all new phones are required to meet authentication standards. The cellular market is, however, not likely to achieve that result on its own. This is because the cost of fraud is what is termed an "externality" in economic theory. Unlike features such as hands-free dialing or number memory, authentication does not have an immediate, measurable benefit to the consumer. Consumers do not have the economic incentive to pay the added cost of a phone with authentication, since they are credited for any fraudulent use of their phones. Shifting the risk onto the consumer for fraudulent use of their

phones, however, would be unfair. The industry costs associated with fraud are thus being spread among all consumers. For this reason, no individual consumer will pay for authentication, because the incremental decline in overall system fraud caused by his one phone purchase will not make up for the higher price of a phone with authentication capability. In addition to this lack of individual consumer demand for phones with authentication, those carriers who do not face severe fraud problems will, for the same reasons, lack the economic incentive to demand authentication in all phones they purchase from suppliers.

Intervention by the Commission is necessary to eliminate the economic inefficiency caused by this externality, and to ensure that all phones comply with authentication standards. A blanket authentication rule will have an added benefit, in that it should lead to a decline in the per-phone cost of adding authentication capability. Those costs are largely the result of the high front-end fixed costs of software development; the per-phone installation cost is significantly less. Given the high fixed costs and low variable costs, subjecting all phones to the standard should decrease per-unit costs.

In short, a mandatory authentication standard is essential for authentication to become broadly available in a short period of time. Prompt and aggressive action by the Commission is critical. Authentication technology is approved and available. See TIA/CTIA Joint Reply at 5 and n. 10. There is no reason why it should not be required, particularly given the absence of any opposition to it in the record. Delay in adopting authentication

will only serve the interests of those who defraud the cellular industry and its customers.

III. AUTHENTICATION SHOULD BE REQUIRED FOR ALL
PHONES MANUFACTURED AFTER A DATE CERTAIN.

While the CTIA-TIA proposal is in the public interest, it does not go far enough. It would impose those standards only on equipment that is type-accepted after July 1, 1995. All equipment which is covered by type-acceptance before that date would be permanently "grandfathered." This approach to phasing in authentication is inadequate. Given that there is no expiration date for type-acceptance, a particular phone model, type accepted as late as June 30, 1995, could continue to be sold indefinitely -- even though it fails to comply with authentication standards.

For this reason, the rule should be worded in terms of a manufacturing deadline, rather than a type-acceptance deadline. All cellular telephones manufactured or imported after that date must comply with the authentication standards. Given that TIA states that the technology to comply already exists, it would not appear to be a burden on the equipment industry to implement that technology three months from the Commission's adoption of those standards. This would close the large loophole created by allowing indefinite sale of phones covered by a pre-July 1 type acceptance.

On many previous occasions -- including its prior efforts to address cellular fraud -- the Commission has used a "manufacture or import" deadline, and imposed new standards on all equipment manufactured or imported after a specific date. For example:

-- In 1993, in its first action to address cellular fraud, the Commission adopted Section 15.211. This rule prohibited the manufacture or importation of "scanning receivers" (equipment capable of scanning cellular frequencies) after April 24, 1994. The Commission made it clear that the prohibition on manufacture/import applied even to scanners which had previously been type-accepted but were manufactured or imported after that date. Amendment of Parts 2 and 15 to Prohibit Marketing of Radio Scanners Capable of Intercepting Cellular Telephone Conversations, ET Docket 93-1, 8 FCC Rcd. 2911.

-- In 1991, the Commission adopted a rule to implement legislation requiring that all TV sets be capable of displaying closed-captioning. New Section 15.119, which sets forth standards for closed-captioning, applies to "all television receivers shipped in interstate commerce, manufactured, assembled or imported from any foreign country" after June 30, 1993." Implementation of the Television Decoder Circuitry Act of 1990, ET Docket No. 91-1, 68 RR2d 1684.

-- In 1994, the Commission adopted new Section 15.118, which requires that all television receivers labeled "cable ready" and manufactured or imported after June 30, 1997, must comply with new technical performance standards to facilitate their compatibility with cable service. Implementation of Section 17 of the Cable Television Consumer Protection and Competition Act of 1992, ET Docket 93-7, 75 RR2d 152.

In this current proceeding as well, the clearest and most effective approach for combatting cellular fraud is to impose authentication standards on all equipment manufactured or imported after a date certain. Given that authentication technology is available, the Commission should set this date as three months after release of its order in this proceeding.^{4/}

^{4/} The need for urgent Commission action against cellular fraud is well-documented. The Commission has before it in this docket unrelated petitions for reconsideration. If those other issues will require additional time to resolve, the Commission should immediately issue a partial order on reconsideration, limited to modifying Section 22.919.

IV. CONCLUSION

For the above reasons and those set forth in the TIA-CTIA Joint Reply, the Commission should continue to take aggressive action to fight cellular fraud, by modifying Section 22.919 to require compliance with industry authentication standards. In addition, those standards should be imposed on all cellular phones manufactured after the date that is three months after the release of the Commission's Order on Reconsideration in this proceeding.

Respectfully submitted,

AIRTOUCH COMMUNICATIONS, INC.

By: David A. Gross / ITS
David A. Gross
Kathleen Q. Abernathy
Airtouch Communications, Inc.
1818 N Street, N.W., Suite 800
Washington, D.C. 20036
(202) 293-3800

ALLTEL MOBILE COMMUNICATIONS, INC.

By: Glenn S. Rabin / ITS
Glenn S. Rabin
Federal Regulatory Counsel
655 15th Street, N.W., Suite 220
Washington, D.C. 20005
(202) 783-3976

BATON ROUGE CELLULAR TELEPHONE COMPANY
RADIOFONE, INC.

By: Mark Jeanson / ITS
Mark Jeanson
P.O. Box 7338
Metairie, LA 70010

BELL ATLANTIC MOBILE SYSTEMS, INC.

By: Rachael E. Schwartz / ITS
Rachael E. Schwartz
Attorney and Regional Counsel
180 Washington Valley Road
Bedminster, NJ 07921
(908) 306-7392

John T. Scott, III
John T. Scott, III
Crowell & Moring
1001 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
(202) 624-2500

BELLSOUTH CORPORATION
BELLSOUTH CELLULAR CORP.

By: Jim O. Llewellyn / ITS
Jim O. Llewellyn
1155 Peachtree Street, SE
Atlanta, GA 30309
(404) 249-4445

NEW PAR

By: Jay L. Birnbaum / ITS
Jay L. Birnbaum
Skadden Arps Slate
Meagher & Flom
1440 New York Avenue, N.W.
Washington, D.C. 20005
(202) 371-7288

NYNEX MOBILE COMMUNICATIONS, INC.

By: Edward A. Wholl / ITS
Edward A. Wholl
NYNEX Corporation
120 Bloomingdale Road
White Plains, NY 10605
(914) 644-5525

U S WEST NEWVECTOR GROUP, INC.

By: Donald M. Mukai *AMS*
Donald M. Mukai
3350 161st Avenue, S.E.
Bellevue, Washington

VANGUARD CELLULAR SYSTEMS, INC.

By: Richard C. Rowlenson *AMS*
Richard C. Rowlenson
Senior Vice President and
General Counsel
1002 Pisgah Church Road, Suite 300
Greensboro, NC 27455
(910) 545-2223

Their Attorneys

Dated: April 3, 1995

CERTIFICATE OF SERVICE

I hereby certify that I have this 3rd day of April, 1995,
caused copies of the foregoing "Comments of Cellular Carriers" to
be sent by first-class mail, postage prepaid, to the following:

Michael F. Altschul
Vice President, General Counsel
Cellular Telecommunications Industry Ass'n
1250 Connecticut Avenue, N.W., Suite 200
Washington, D.C. 20036

Eric J. Schimmel
Telecommunications Industry Association
2500 Wilson Boulevard, Suite 300
Arlington, VA 22201

Grier C. Raclin
Gardner, Carton & Douglas
1301 K Street, N.W., East Tower
Washington, D.C. 20005
(Attorneys for TIA)

Timothy J. Fitzgibbon
Thomas F. Bardo
Carter, Ledyard & Milburn
1350 I Street, N.W., Suite 870
Washington, D.C. 20005

M.G. Heavener
President
MTC Communications
Box 2171
Gaithersburg, MD 20886



John T. Scott, III